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2012-01

# Academic Affairs Academic Program Metrics 2012

Naval Postgraduate School (U.S.)

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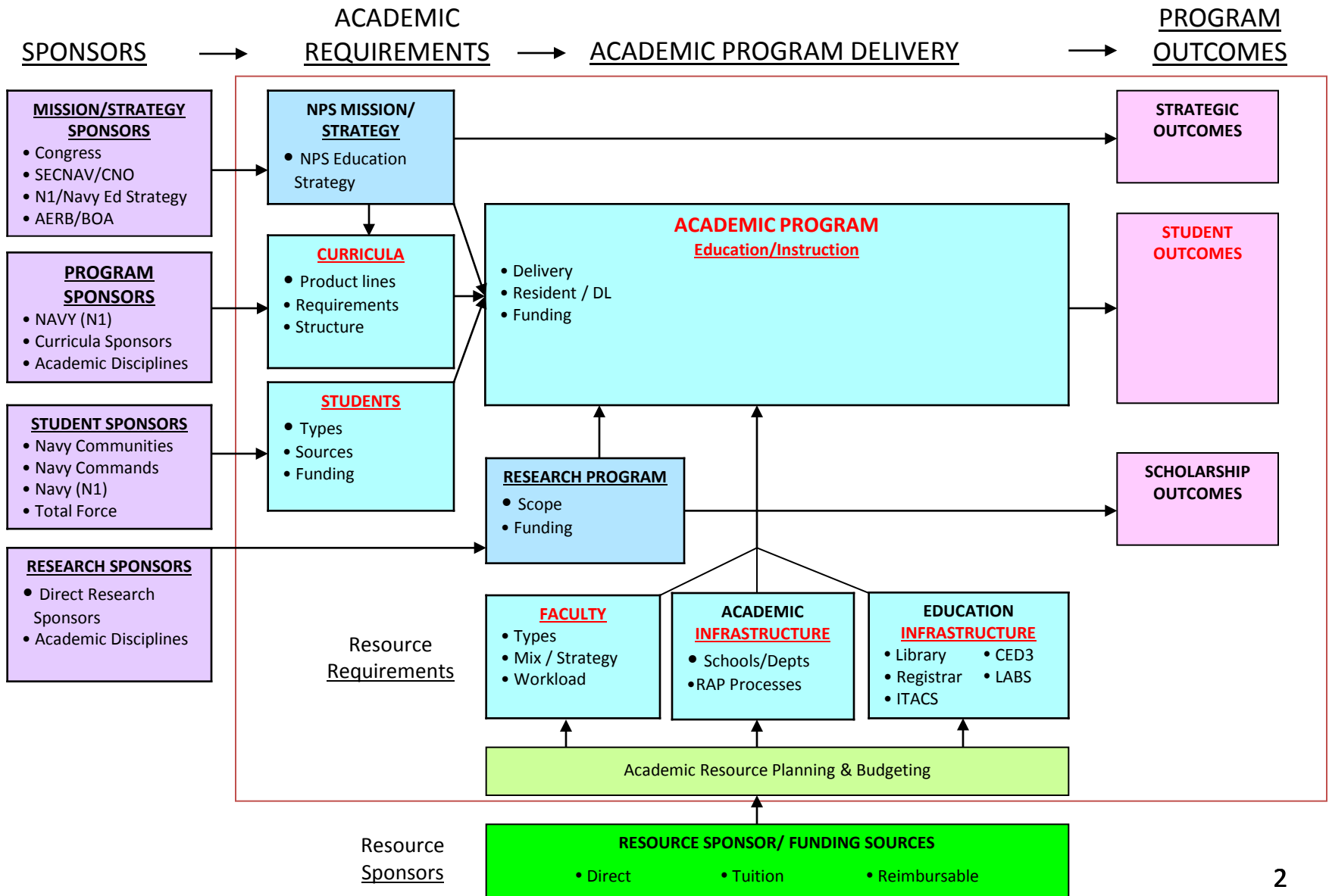
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**Academic Affairs**

# **Academic Program Metrics 2012**

**SPC 1/24/12**

# Academic Operations



## **Academic Program Metric Areas**

- Student Enrollment
- Goal 2 Thrusts
- Student Admissions
- Student Preparation
- Curricular Structure
- Student Outcomes
- Instruction Activity
- Instructional Faculty
- Faculty
- Faculty Workload
- Education Cost

## Student Enrollment

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\*Includes all students/all programs

# Enrollment Toward NPS Goal 2: Total Force Education

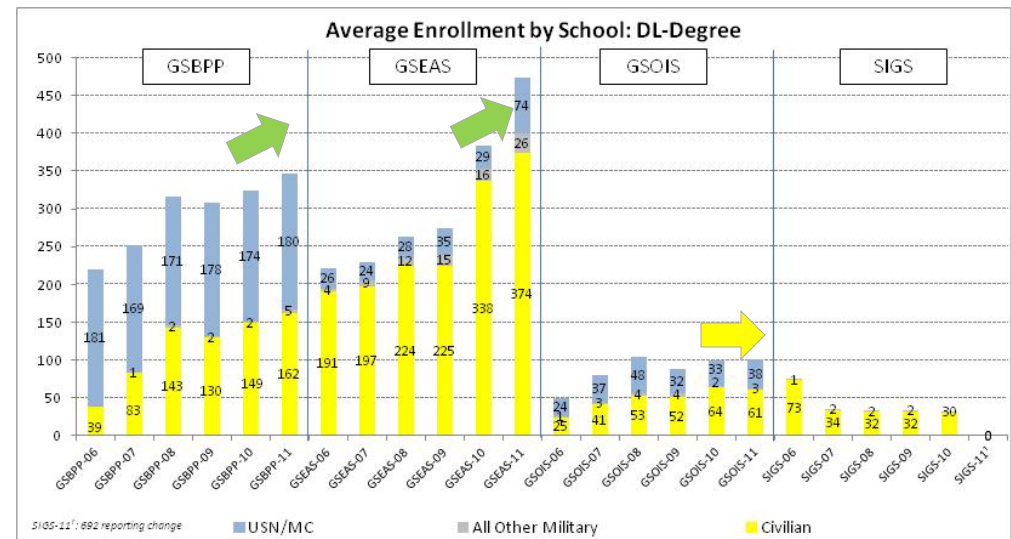
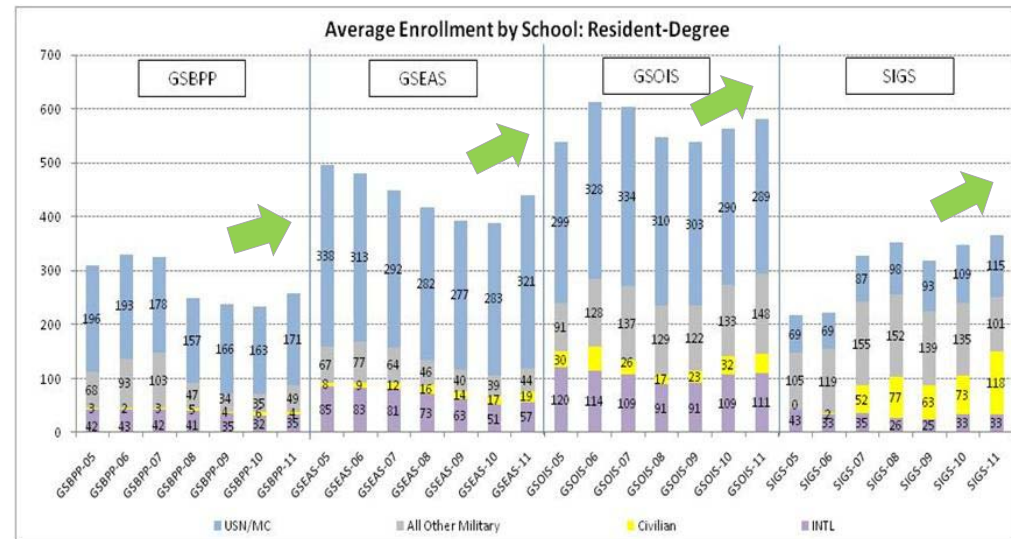
## ENROLLMENT PATTERNS DIFFER BY SCHOOL:

- Proportion of Naval
- Involvement in DL
- Masters vs PhD vs Certs

## NPS GOAL #2

### Total Force Education Thrusts

- Distributed Education for Naval Officers
- Educating the DOD/DON Science & Technology Workforce
- Homeland Defense & Security
- PhD Education Programs
- Students from Govt Contractors



## Enrollment Toward Goal 2: Total Force Thrusts

### Distance Learning Education for Naval Officers

Year	FY06	FY07	FY08	FY09	FY10	FY11
Degree - USN	231	231	246	245	237	300
Degree - URL	159	167	173	172	169	222
Certs - USN	136	122	78	88	94	91
Certs - URL	56	48	25	33	39	60

### Educating the DOD/DON Science & Technology Workforce

Year	FY06	FY07	FY08	FY09	FY10	FY11
SE / ACQ	330	393	521	520	624	635
SCI / TECH	99	106	118	126	155	183

### Educating for Homeland Defense and Security

Year	FY06	FY07	FY08	FY09	FY10	FY11
MS-HDS (692)	86	92	116	100	107	125
MS-HDS (691)	17	29	23	27	29	22

### Educating the Civilian Science & Technology Workforce

Year	FY06	FY07	FY08	FY09	FY10	FY11
PhDs	43	53	84	71	86	92
Contractors		24	27	25	48	44

### Educating for the Global Defense Environment - Internationals

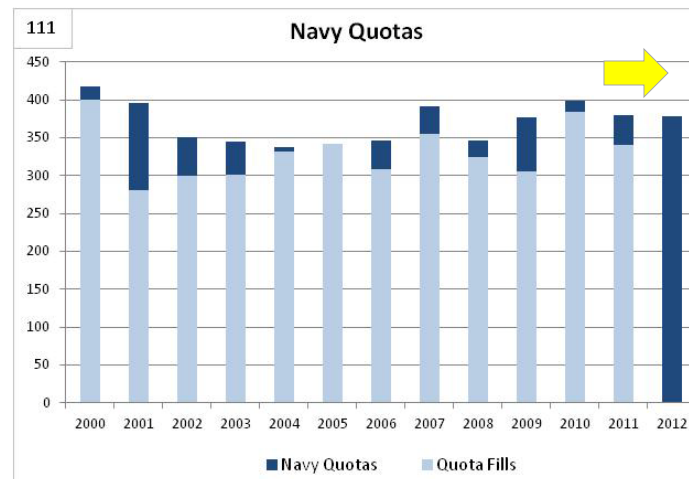
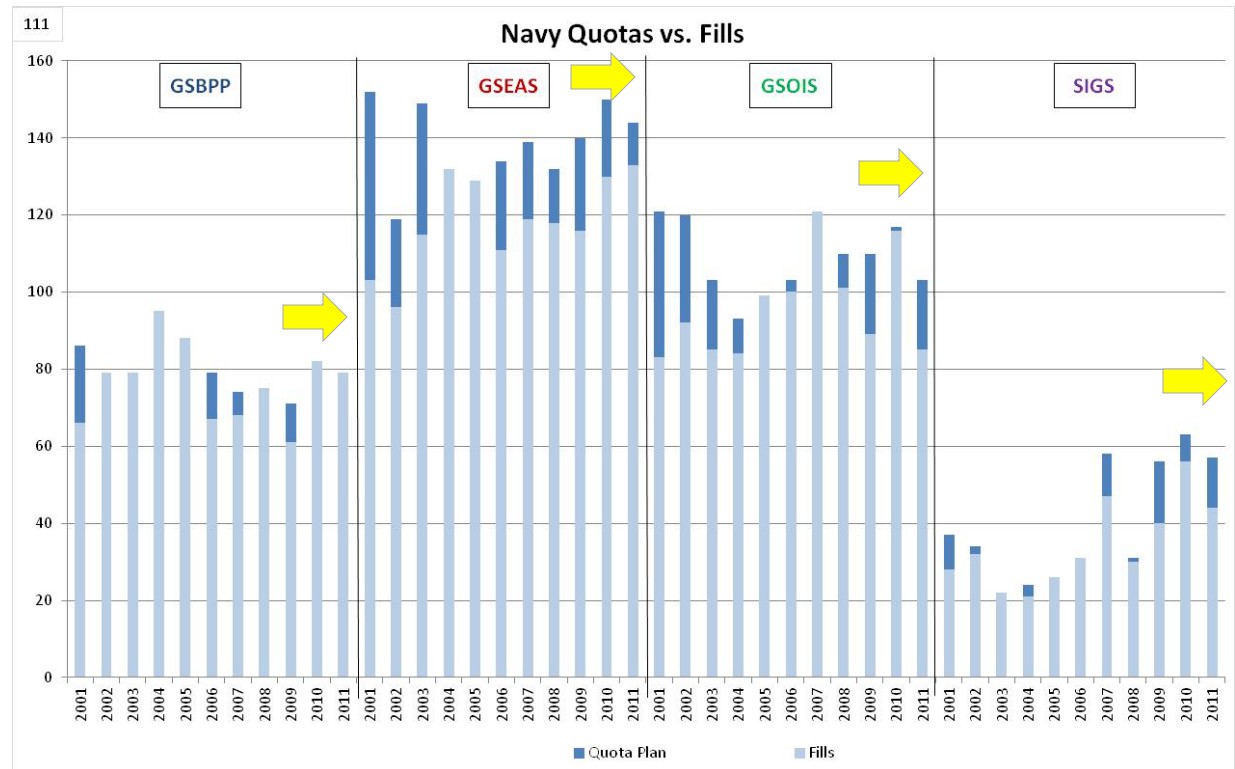
Year	FY06	FY07	FY08	FY09	FY10	FY11
Internationals	274	266	230	213	224	235

#### Total Force Thrusts Summary

1. USN in DL	Degree increase. Certs stable
2. S&T Workforce	Significant increase
3. Homeland Defense/Security	Significant increase
4. PhDs	Increasing
5. Contractors	Degree stable. Well below quota
6. International Students	Recovering

# Student Admissions – Navy Quotas & Fills

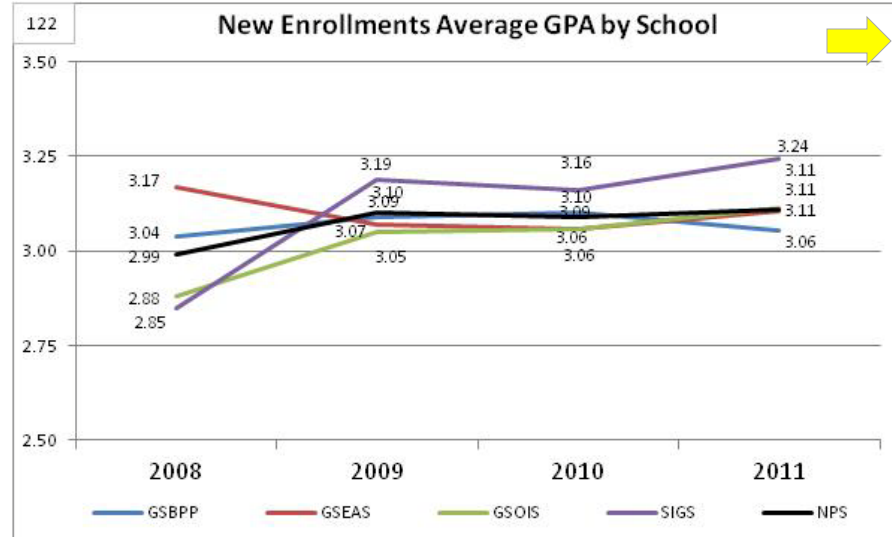
- Navy quotas fluctuating, but on average flat.
- Average Fill Rate over the last seven years is 92%
- Recent years:
  - GSBPP averaging flat
  - GSEAS recent uptick
  - GSOIS fluctuating
  - SIGS big jump starting 2007





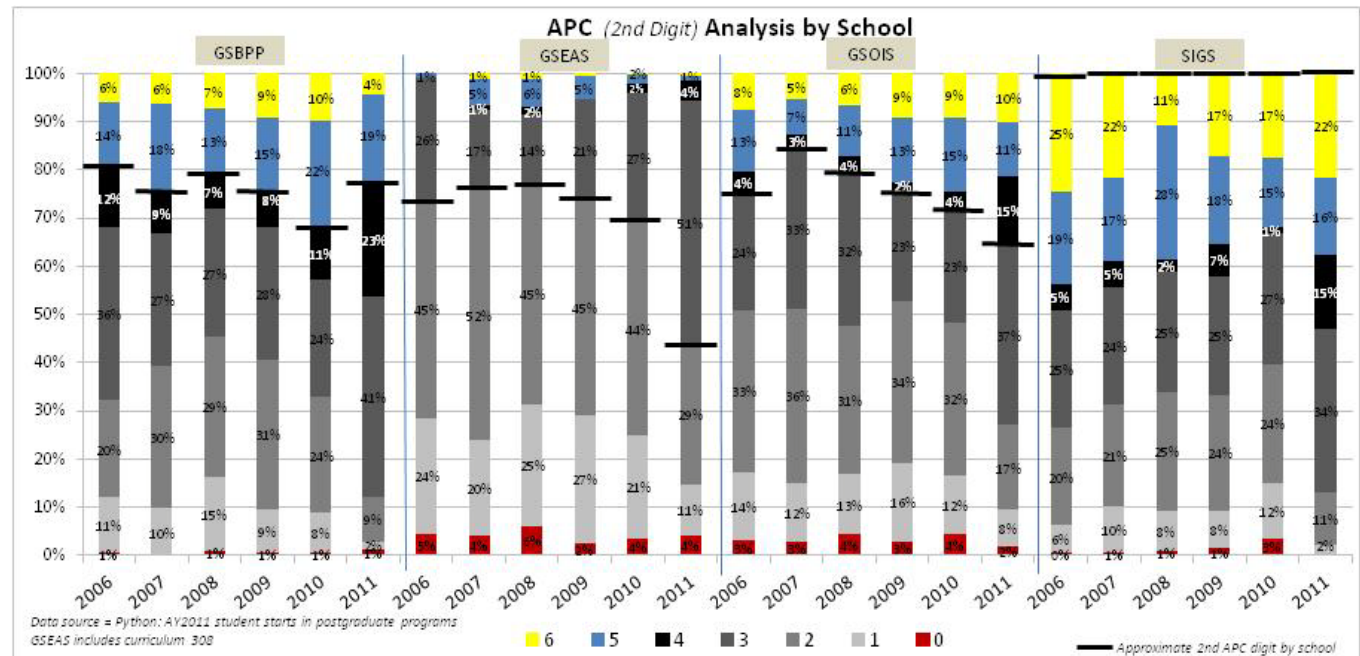
# Student Preparation – Ugrad GPA & Math

- Small uptick (.02) in incoming students' Ugrad GPA (insignificant)



- Math prep fluctuates

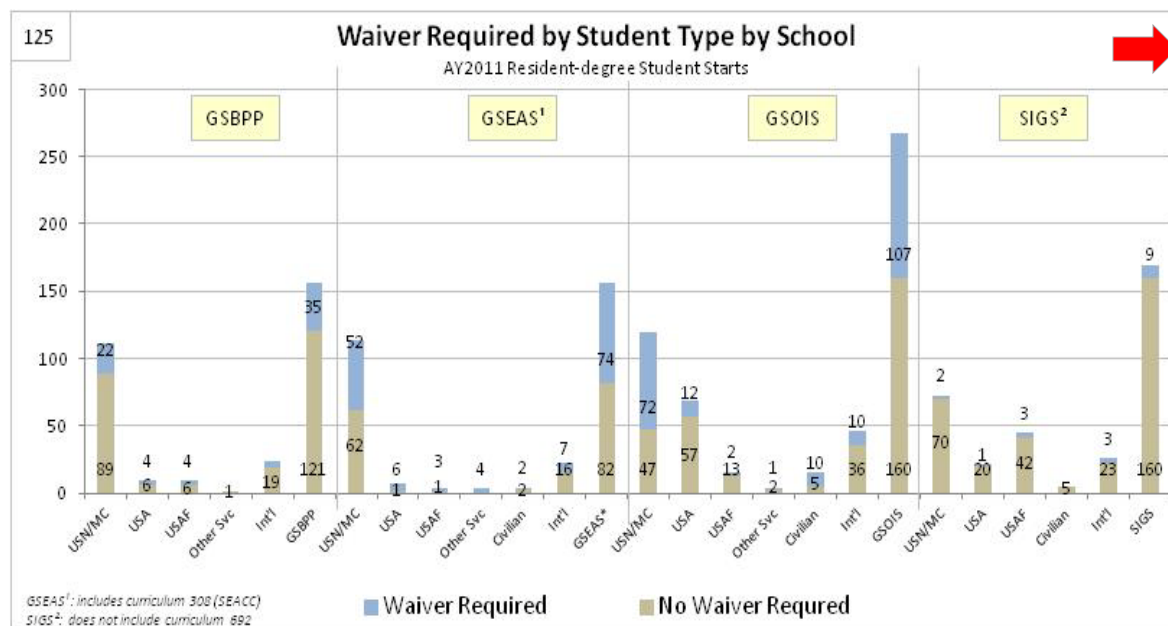
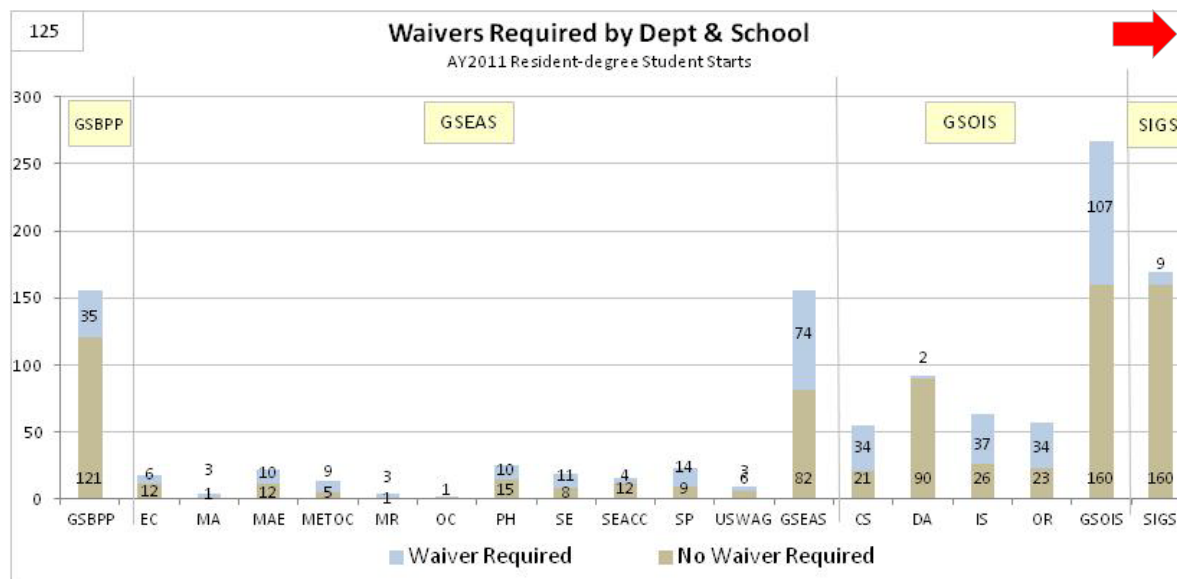
- Declining math preparation over the last 4 years →
- GSEAS AY11 student – 55% fall below the minimum math APC
- Change to the 2<sup>nd</sup> digit of the APC (Jan 2010)



# Student Preparation - Waivers

•NPS: 30% of students required waiver (225 of 748)

•Rate of waivers higher in Tech Currics: Naval 47%, non-Naval 36%



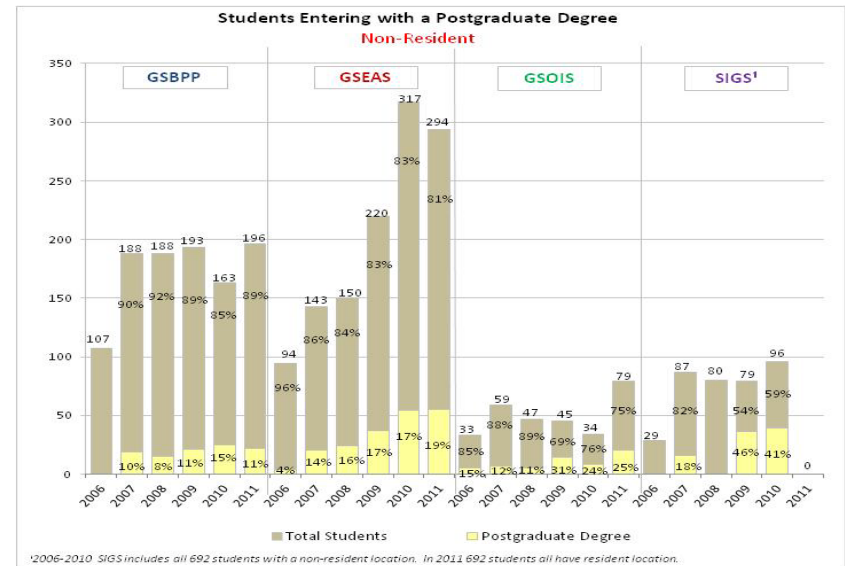
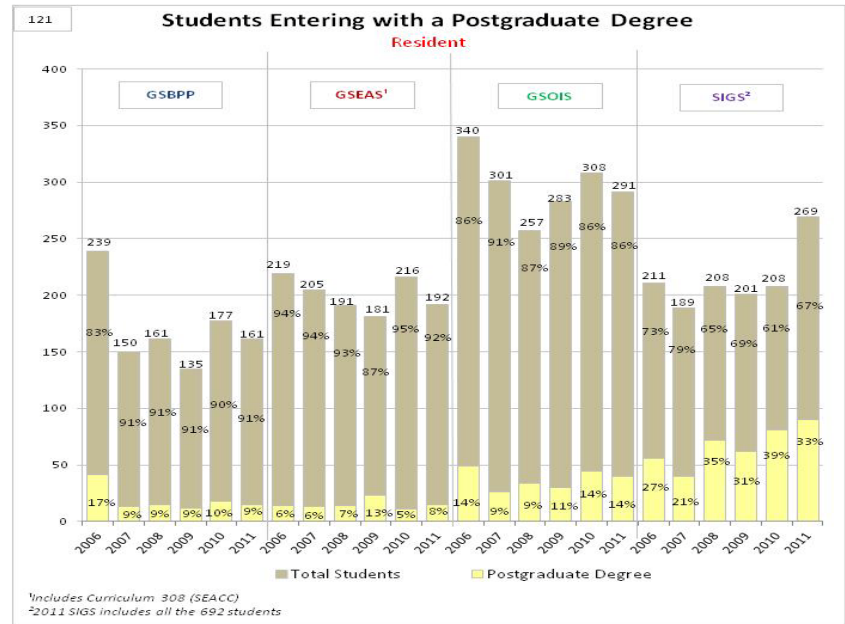
# Student Preparation – by School

	SCHOOLS - METRICS *					SCHOOLS - Shares/Norms*					
	GSEAS	GSOIS	GSBPP	SIGS	NPS	GSEAS	GSOIS	GSBPP	SIGS	NPS	
	Eng & Science	Ops & Info	Mgmt & Policy	Intl & Scrty		Eng & Science	Ops & Info	Mgmt & Policy	Intl & Scrty		
<b>PROGRAM CHARACTERISTICS</b>											
<b>NAVY STUDENTS - Fills &amp; Prep</b>											
# Navy quotas (FY10)	150	117	82	62	411	36%	28%	20%	15%	100%	share
Approx fill rate	87%	99%	100%	90%	93%	94%	106%	108%	97%	100%	norm
Naval - % Admissions Waiver	33%	38%	20%	15%	28%	118%	136%	71%	54%	100%	norm
Naval - % "Need pre-grad work"	50%	67%	20%	15%	42%	119%	160%	48%	36%	100%	norm

\*FY10 Data

- Naval students: Highest need for waiver in GSEAS/GSOIS
- Refresher: Second indicator of preparedness – need for refresher:
  - 53% of students in curricula that offer a refresher take one.
  - Similar stats for Naval and Non-Naval
- Combined indicator of preparedness (need waiver and/or need refresher): 42% of Naval students “unprepared”

# Student Preparation – Prior Masters Degree



# Curricula Structure – Components (Resident)

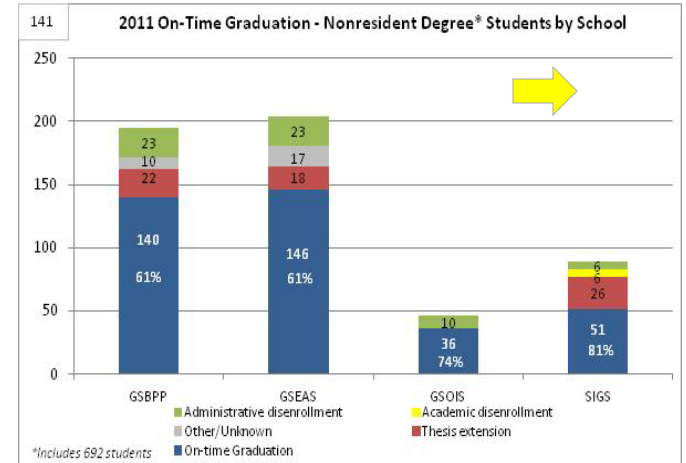
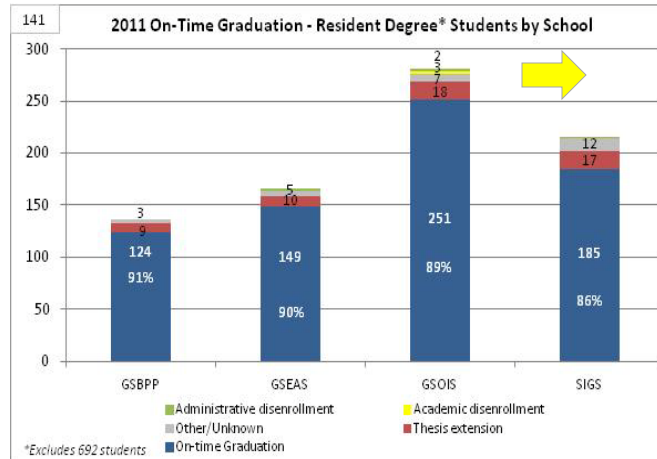
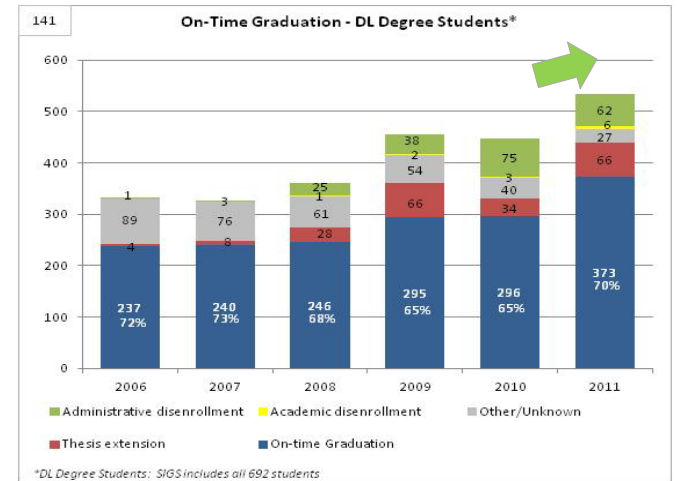
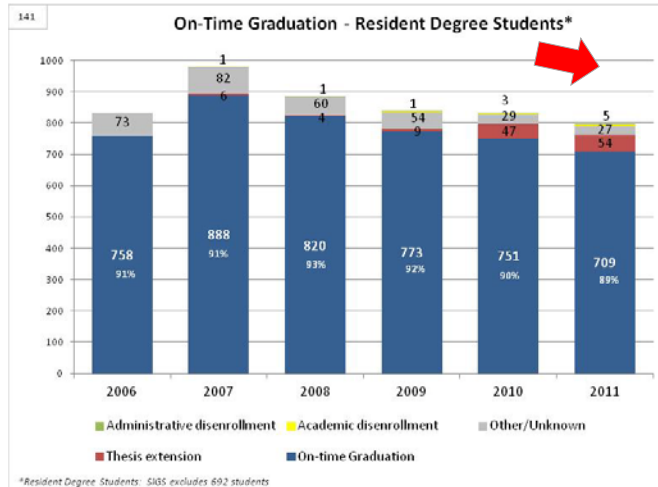
- Undergraduate Work: 14% of coursework is undergraduate; Highest in Tech currics; highest in GSEAS (29%).
- JPME: About 12% of the coursework taken by USN students.
- Capstone/Thesis: Higher proportion of the programs in Tech currics (GSEAS, GSOIS)
- Defense-Unique: % of defense-oriented and/or unique courses varies by School (2005 self-study)

	SCHOOLS - METRICS*					SCHOOLS - Shares/Norms*					
	GSEAS	GSOIS	GSBPP	SIGS	NPS	GSEAS	GSOIS	GSBPP	SIGS	NPS	
	Eng & Science	Ops & Info	Mgmt & Policy	Intl & Scrty		Eng & Science	Ops & Info	Mgmt & Policy	Intl & Scrty		
<b>PROGRAM CHARACTERISTICS</b>											
<b>PROGRAMS/CURRICULA (Resident)</b>											
# masters currics	15	13	12	9	49	31%	27%	24%	18%	100%	share
# Navy SS currics	12	11	7	9	39	31%	28%	18%	23%	100%	share
# P-codes awarded (xxxxP)	17	11	7	6	41	41%	27%	17%	15%	100%	share
Ave length - credits (resident)	135	126	105	70	125	108%	101%	84%	56%	100%	norm
Curric ave length - qtrs, nominal	~8+	~8	~6	~6	~7.5						
<b>CURRICULUM COMPONENTS (Resident)</b>											
Undergrad proportion	29%	16%	6%	4%	14%	207%	114%	43%	29%	100%	norm
JPME proportion (USN)	11%	12%	14%	21%	12%	92%	100%	117%	175%	100%	norm
Capstone/Thesis proportion	13%	12%	8%	10%	11%	118%	109%	73%	91%	100%	norm
Unique/DoD proportion	42%	52%	54%	77%	51%	82%	102%	106%	151%	100%	norm

\*FY10 Data

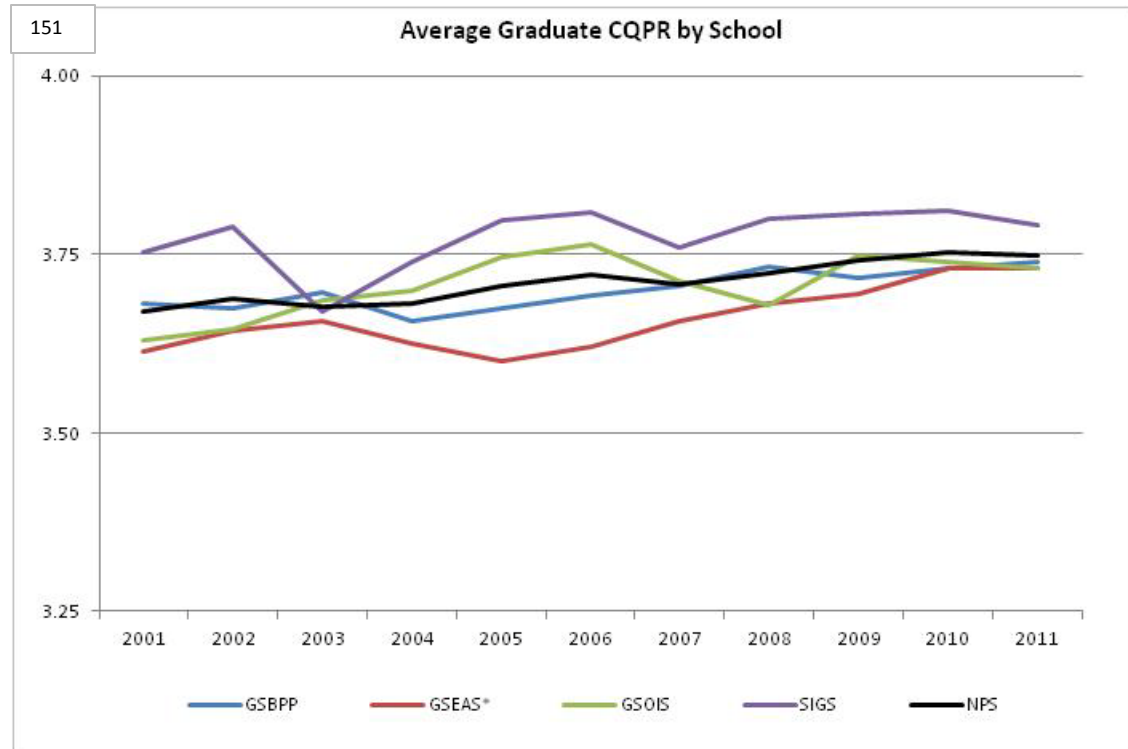
# Student Outcomes – On-Time Completion

- Resident on-time graduation rate gradual decline to 89% in FY11
- Thesis extension explains about 60% of incompletes
- DL on-time graduation rate increasing 65% - 70%.
- Administrative disenrollment and thesis extension are ~80% of the incompletes
- (Not shown in charts: DL attrition mostly DoD civilian, not USN.)



## Student Outcomes - Grades

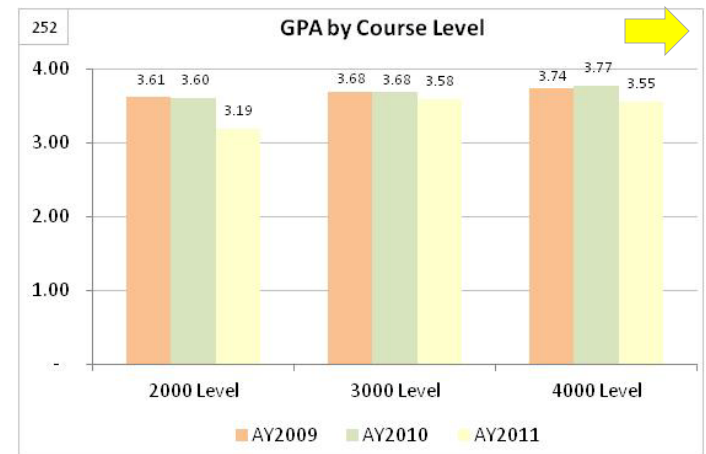
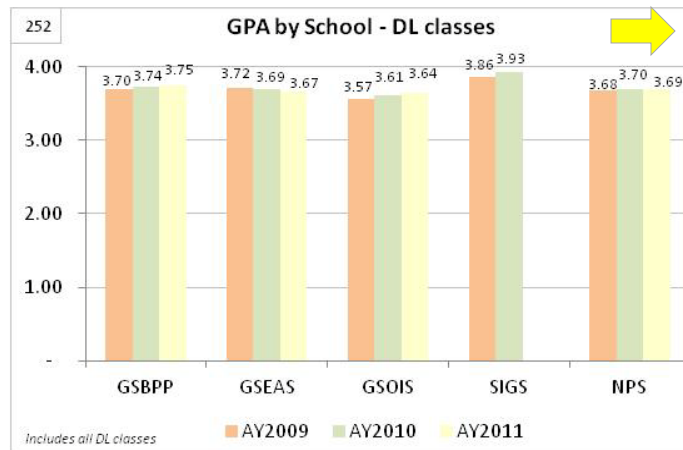
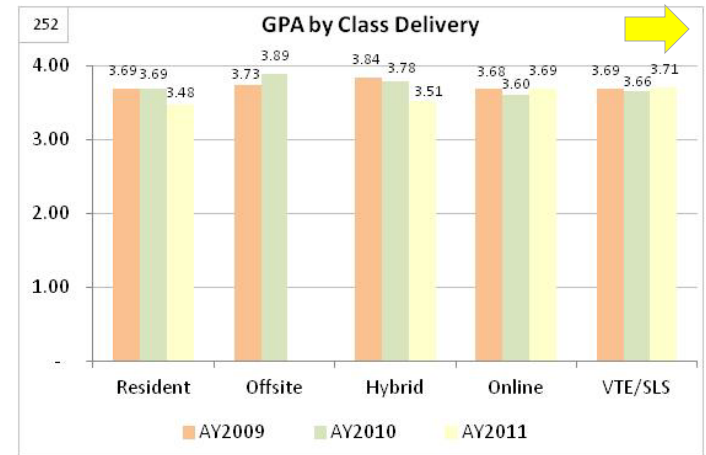
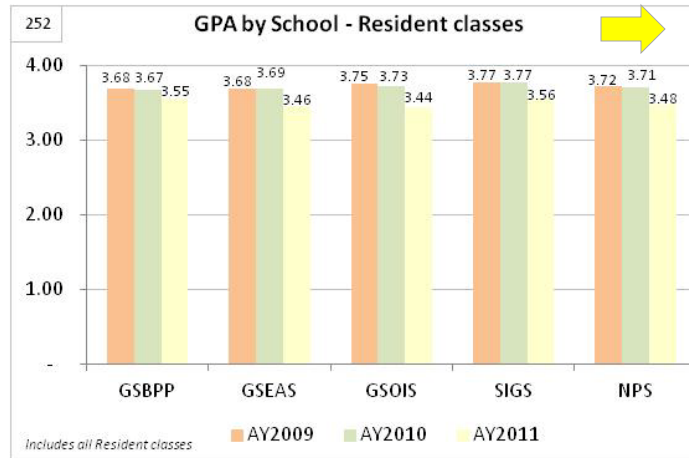
- Slow increase from 3.68 to 3.75 in all schools



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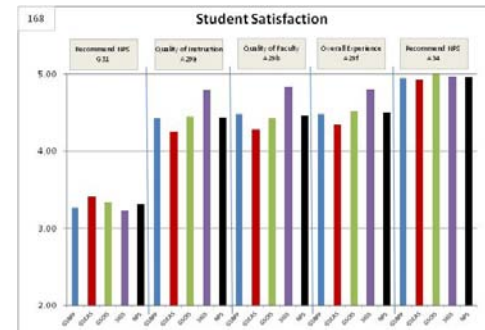
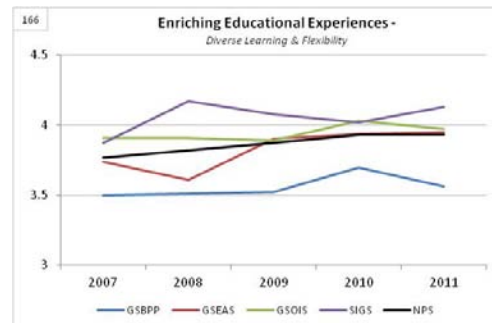
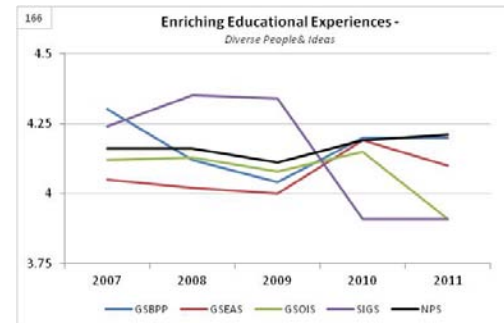
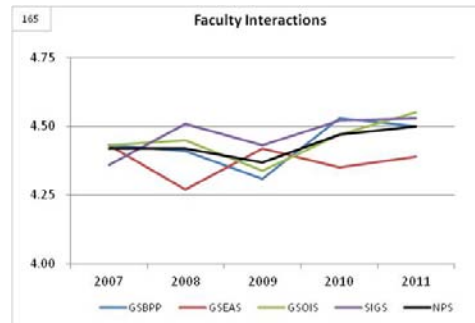
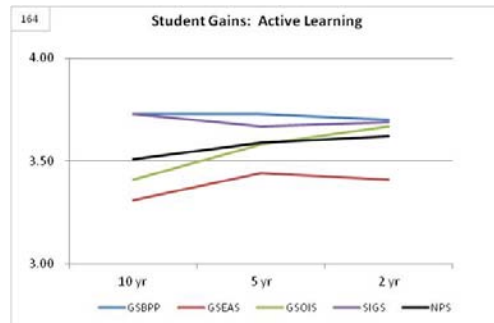
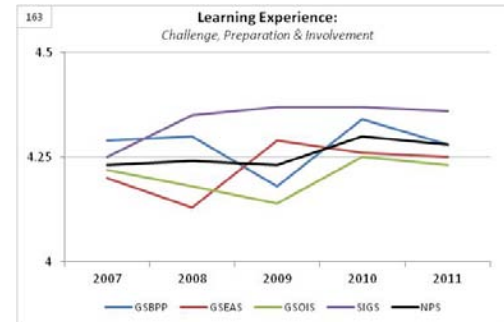
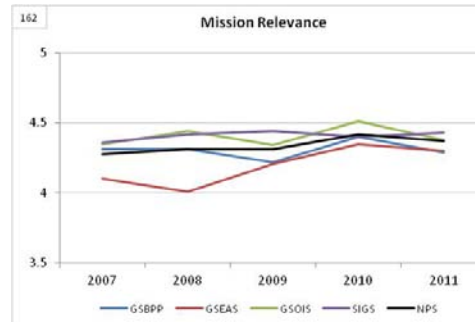
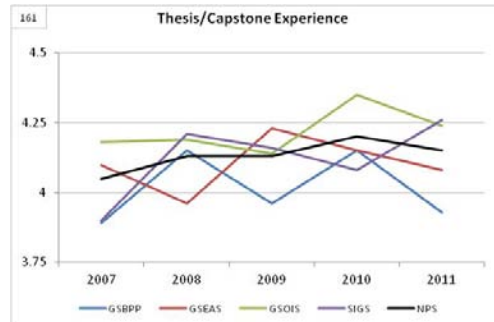
# Student / Teaching Outcomes – Grades Assigned

- FY11 shows an overall decrease in grades assigned



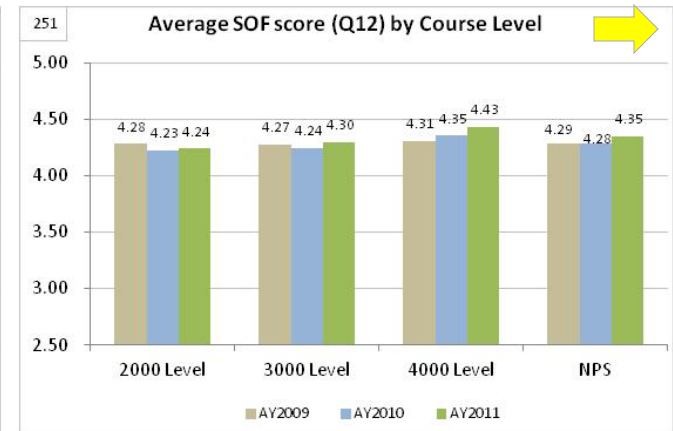
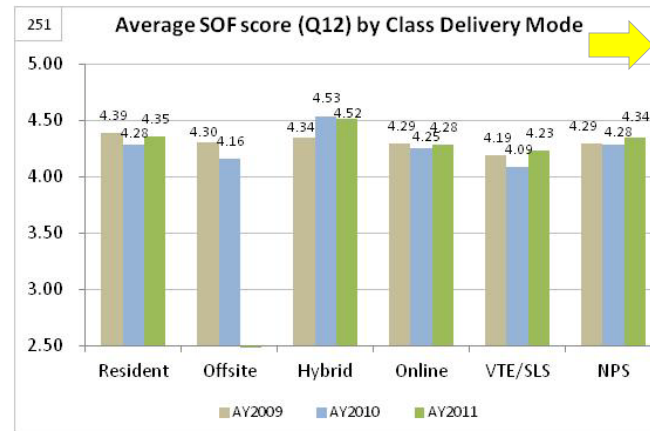
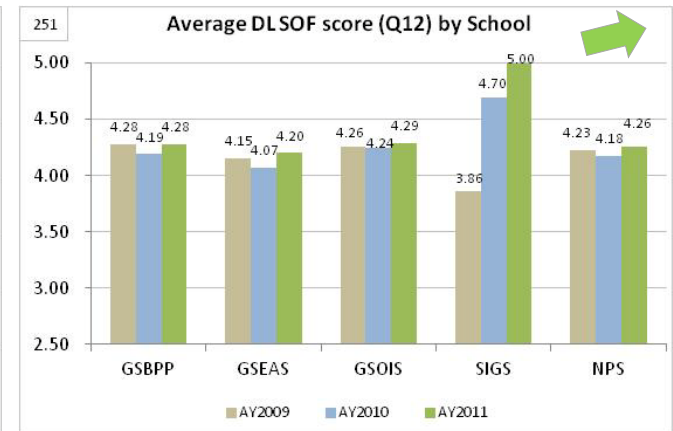
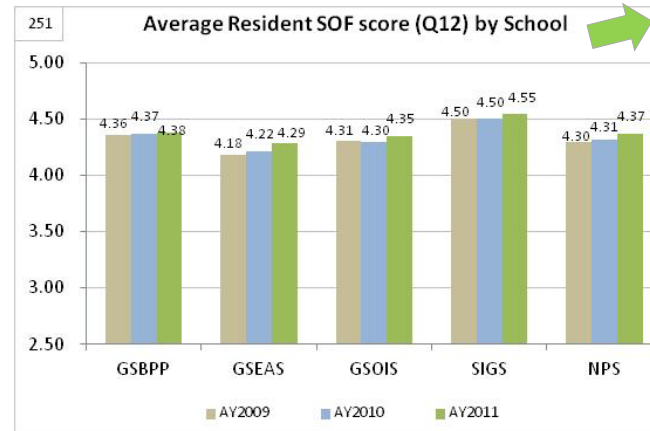


# Student Outcomes – “Student Engagement”



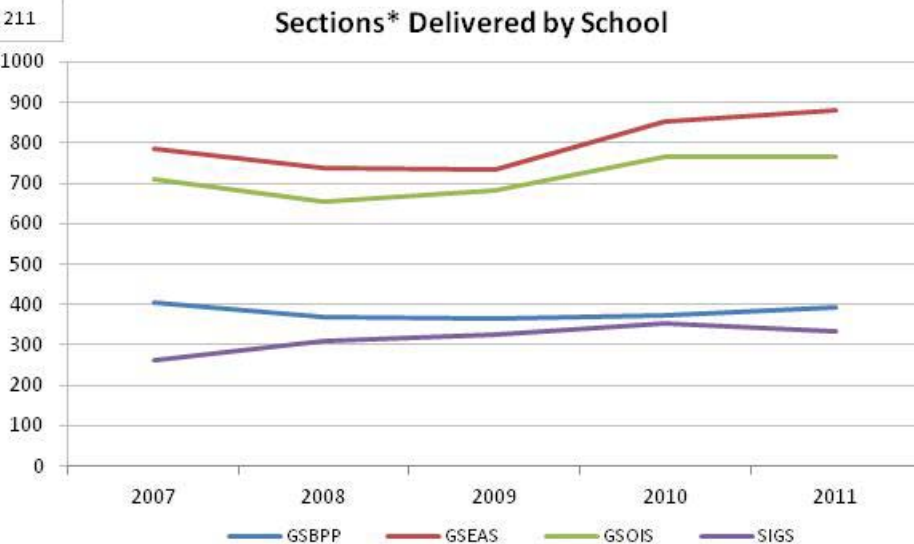
# Teaching Effectiveness – (SOFs)

- Increased SOFs at NPS from prior years
- Some, but little, difference across Schools: Tech Currics lower.
- No major difference across modes: i.e., No DL Penalty
- Little difference by Course level (but 4000 level courses do better).
- (Data not shown: Lower SOFs in small class-size; higher SOFs in class-size ~20s)



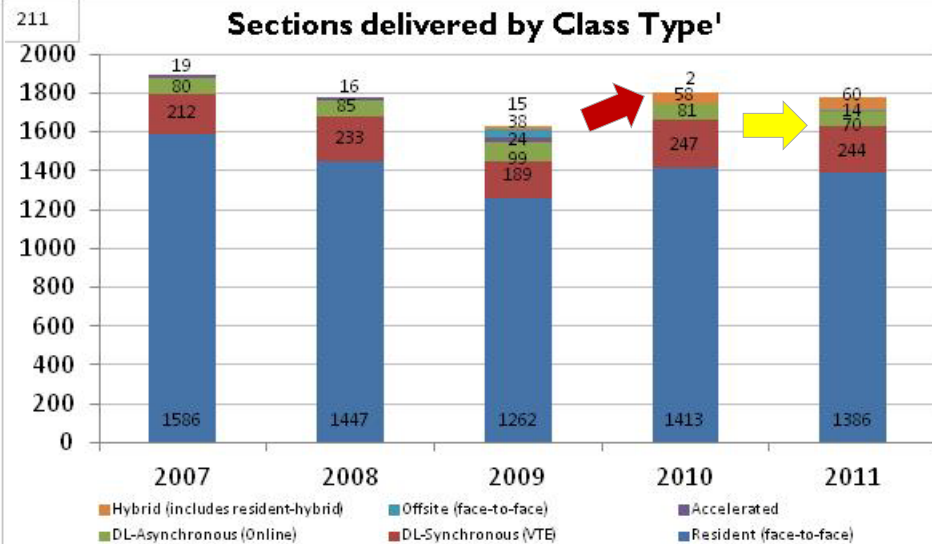
# Instruction Activity – Course Sections Provided

Sections\* Delivered by School



\*Includes all sections, except NWC

Sections delivered by Class Type<sup>1</sup>

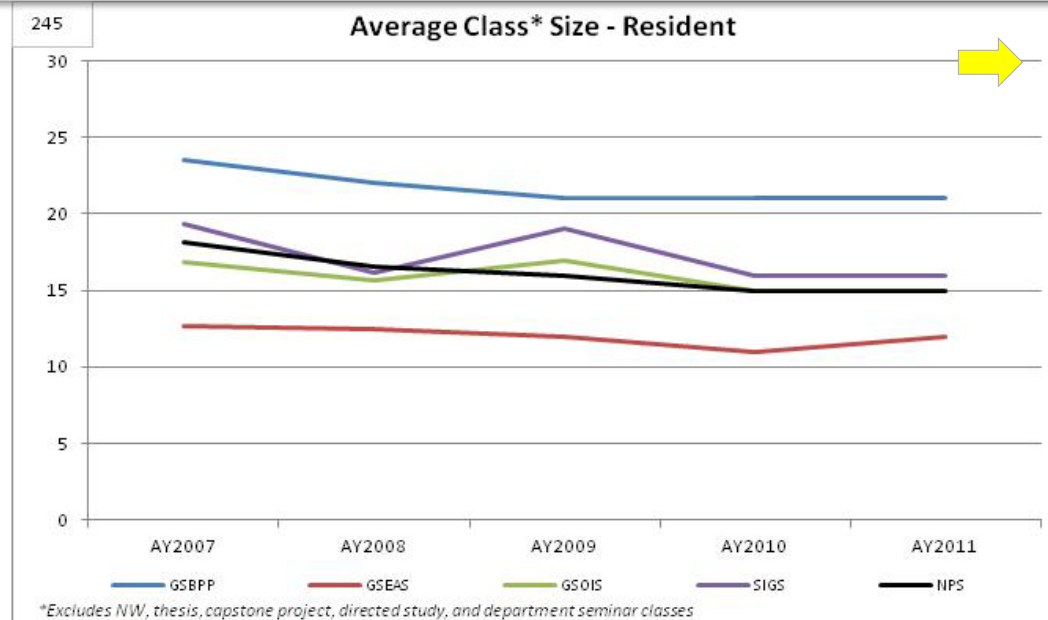


<sup>1</sup>Excludes Thesis, Capstone Project, Directed study, and Department seminar courses

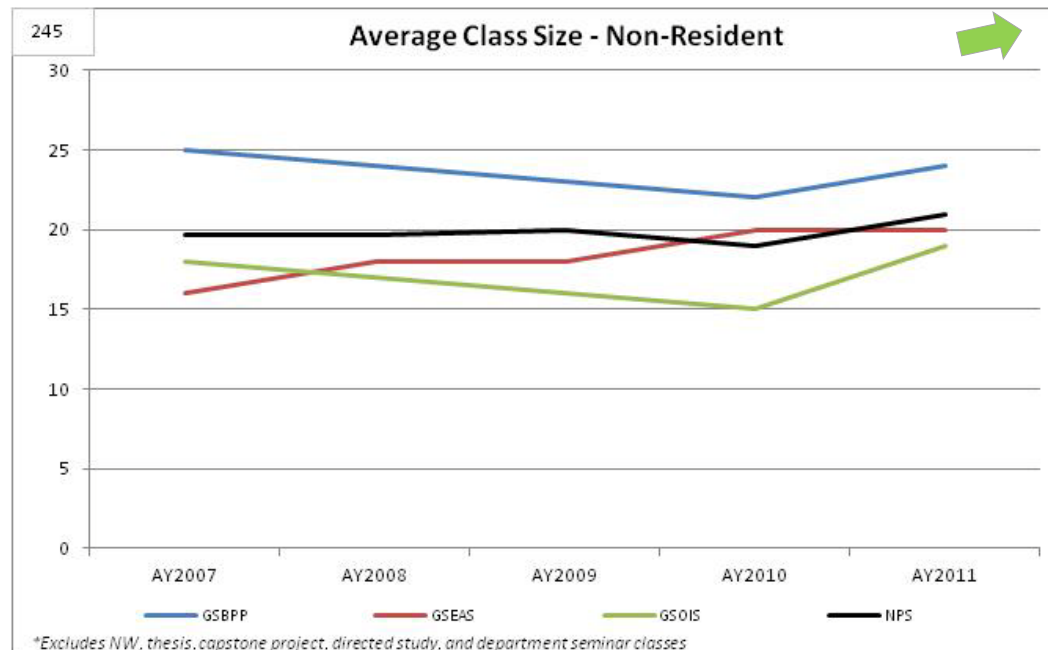
PROGRAM CHARACTERISTICS	SCHOOLS - METRICS*					SCHOOLS - Shares/Norms*					
	GSEAS	GSOIS	GSBPP	SIGS	NPS	GSEAS	GSOIS	GSBPP	SIGS	NPS	
	Eng & Science	Ops & Info	Mgmt & Policy	Intl & Scrty		Eng & Science	Ops & Info	Mgmt & Policy	Intl & Scrty		
<b>PROGRAM DELIVERY (FY10)</b>											
Course sections - Resident	479	439	183	212	1313	36%	33%	14%	16%	100%	share
Course sections - DL	123	89	143	18	373	33%	24%	38%	5%	100%	share
Course sections - Total (Schools)	602	528	326	230	1686	36%	31%	19%	14%	100%	share
Small course sections - resident (<7)	80	31	3	16	130	62%	24%	2%	12%	100%	share
Small course sections %	17%	7%	2%	8%	10%	169%	71%	17%	76%	100%	norm

\*FY10 Data

# Instruction “Productivity” - Class Size

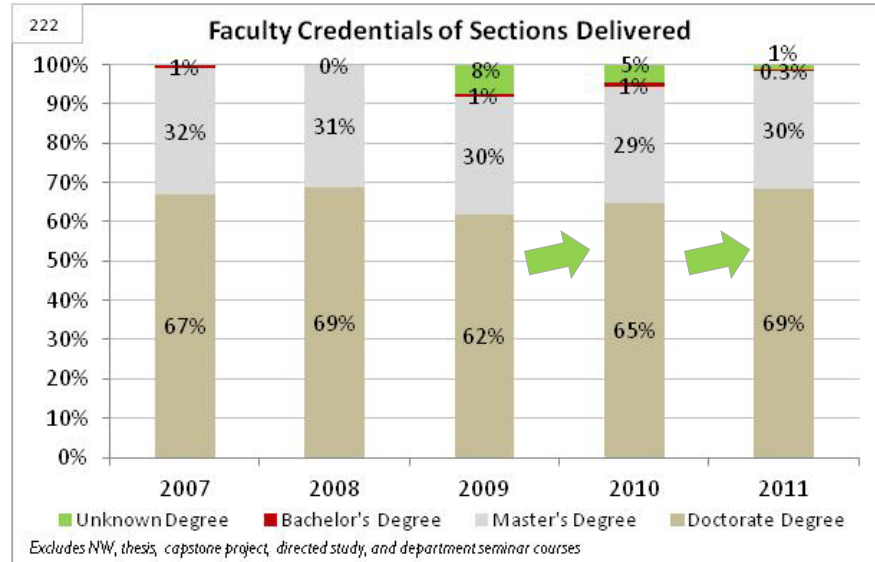
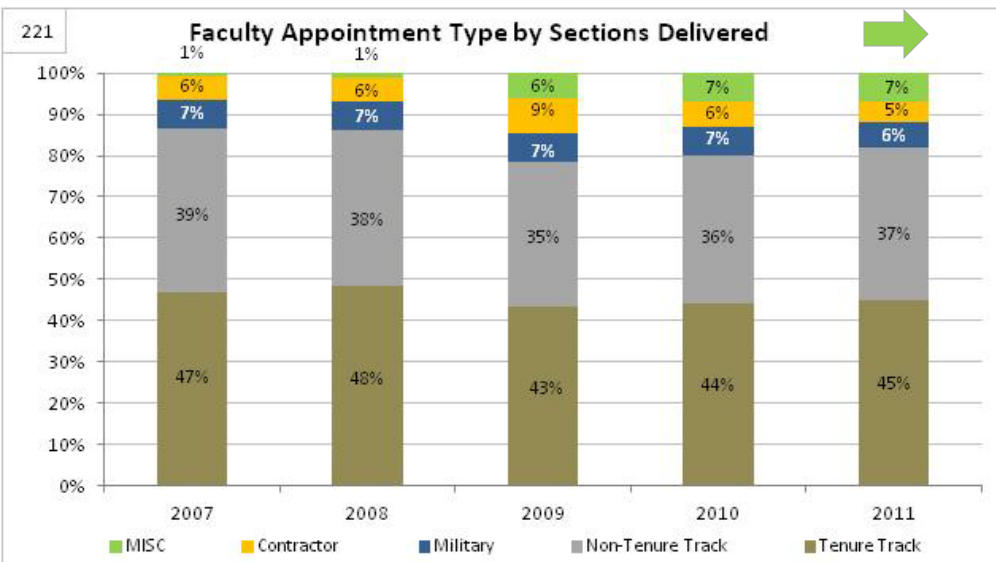


- Average class size in resident program constant



- Average class size in DL program increasing

# Instructional Faculty

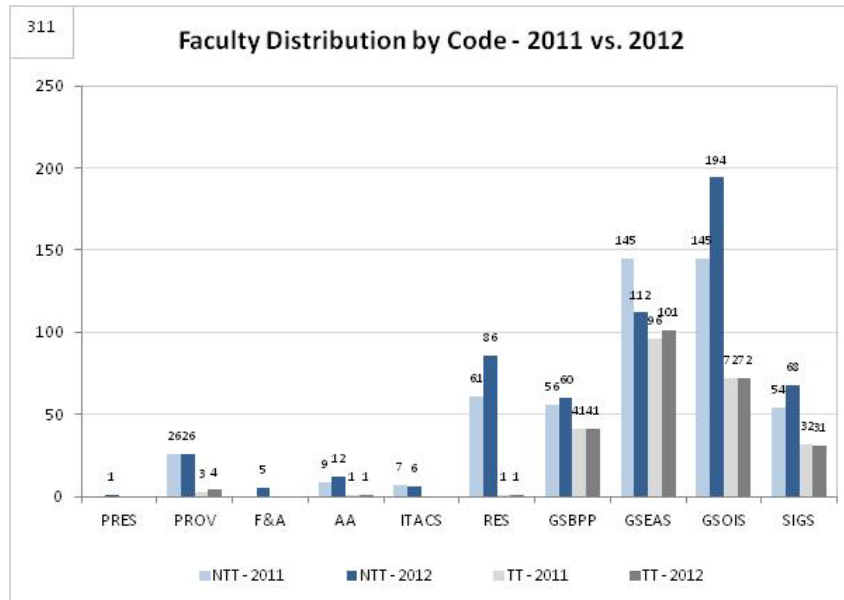


- Increasing proportion of courses taught by PhD qualified faculty

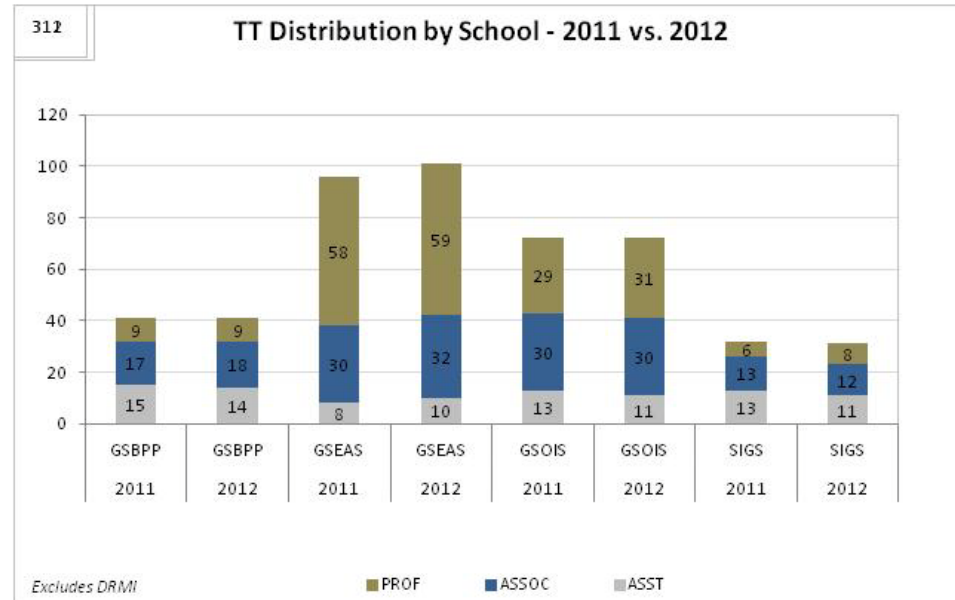
	SCHOOLS - METRICS*					SCHOOLS - Shares/Norms*					
	GSEAS Eng & Science	GSOIS Ops & Info	GSBPP Mgmt & Policy	SIGS Intl & Scrty	NPS	GSEAS Eng & Science	GSOIS Ops & Info	GSBPP Mgmt & Policy	SIGS Intl & Scrty	NPS	
<b>PROGRAM CHARACTERISTICS</b>											
<b>PROGRAM DELIVERY (FY10)</b>											
% TT - resident	51%	48%	56%	40%	45%	113%	107%	124%	89%	100%	norm
% PhD - resident	77%	67%	69%	67%	70%	110%	96%	99%	96%	100%	norm
% PhD - DL	46%	43%	41%	ukn	45%	102%	96%	91%	unk	100%	norm

\*FY10 Data

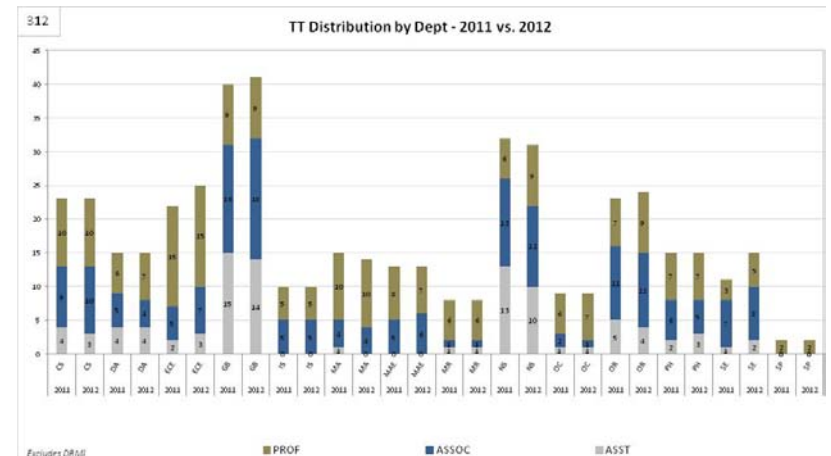
# Faculty Counts -- by Type / Rank



•NTT dominance in numbers in all Schools & Research

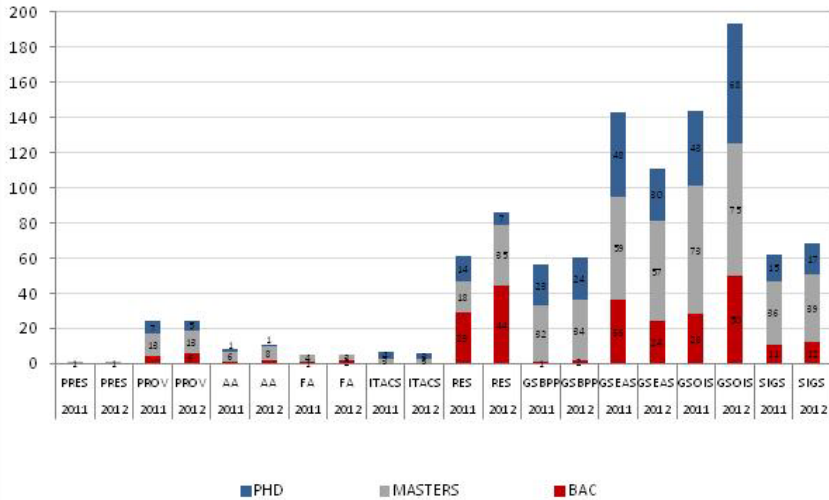


•TT numbers – slight FY11 increase in GSEAS

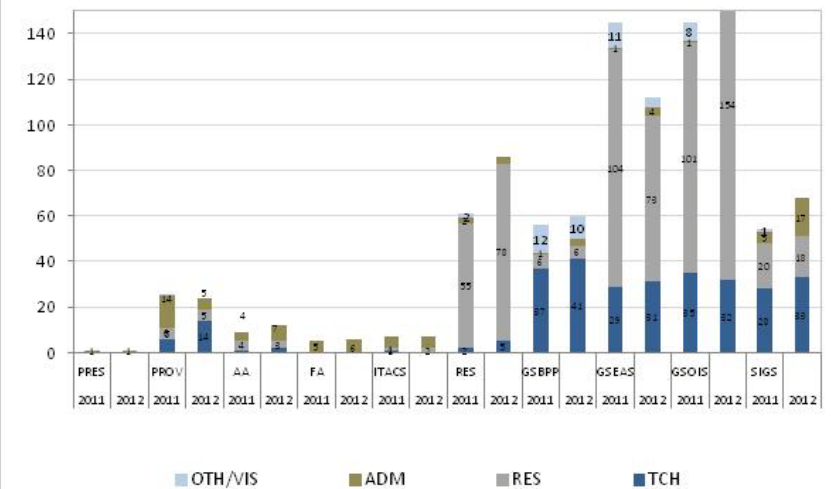


# Faculty by Type / Degree

313 NTT Distribution by High Degree - 2011 vs. 2012

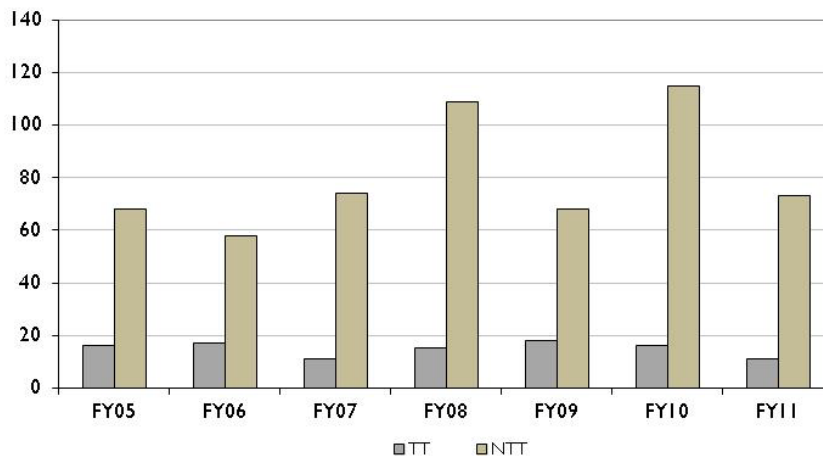


312 NTT Distribution by Code - 2011 vs. 2012



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331 New Hiring Actions



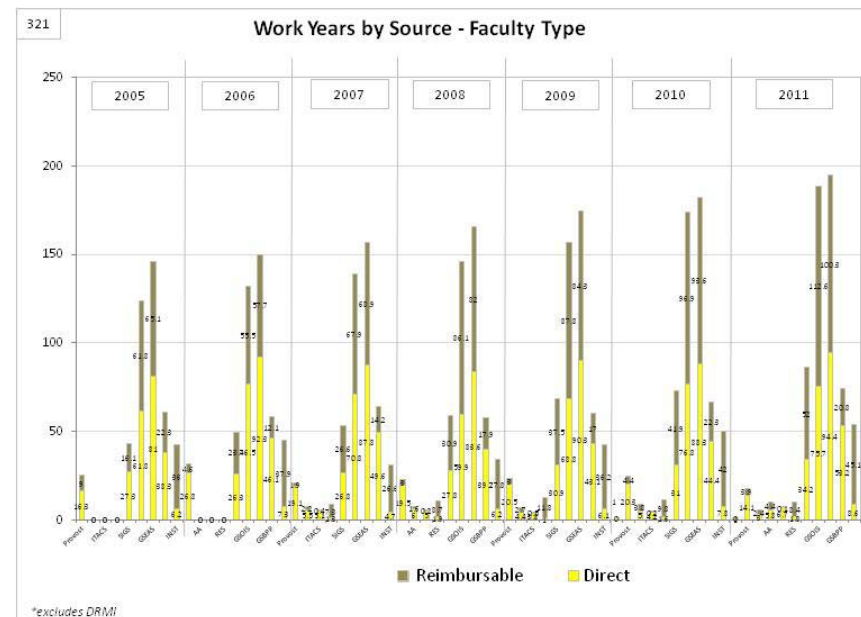
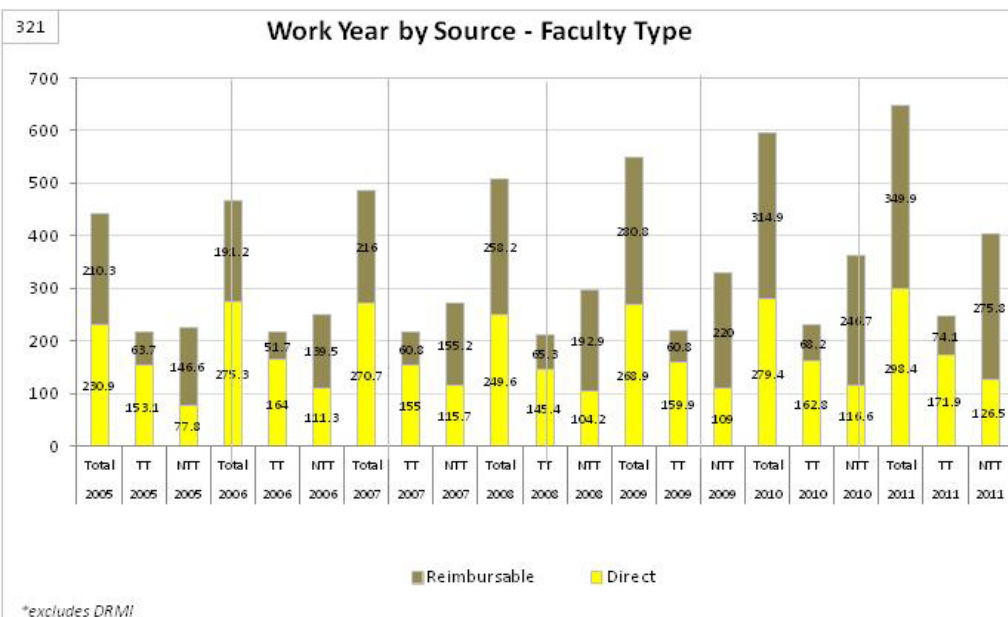
•WOW: Dominance of Research Faculty in GSEAS/GSOIS/Research



# Faculty Workload

	SCHOOLS - METRICS*					SCHOOLS - Shares/Norms*					
	GSEAS Eng & Science	GSOIS Ops & Info	GSBPP Mgmt & Policy	SIGS Intl & Scrty	NPS	GSEAS Eng & Science	GSOIS Ops & Info	GSBPP Mgmt & Policy	SIGS Intl & Scrty	NPS	
<b>FACULTY</b>											
# Tenure-Track - count	96	71	41	33	241	40%	29%	17%	14%	100%	share
# NTT - Teaching - count	29	34	39	29	131	22%	26%	30%	22%	100%	share
# NTT - Research/Other - count	80	100	19	20	219	37%	46%	9%	9%	100%	share
# Count (in Schools)	205	205	99	82	591	35%	35%	17%	14%	100%	share
# Faculty FTEs - Mission Funds	84	75	45	27	231	36%	32%	19%	12%	100%	share
# Faculty FTEs - Reimbursables	93	91	19	18	221	42%	41%	9%	8%	100%	share
# Faculty FTEs - TOTAL	177	166	64	45	452	39%	37%	14%	10%	100%	share
% Mission Funds	47%	45%	70%	60%	51%	93%	88%	138%	117%	100%	norm

\*FY10 Data





# Instruction Cost – Mission Funds Expenditures / Naval Student

NAVAL ENROLLMENT (AOB)	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16
<u>Naval Grad Ed AOB (USN/USMC)</u>												
Resident	901	903	891	848	838	845	896	896	896	896	896	896
DL	7425	7415	231	247	245	237	300	300	300	300	300	300
Cert	?	?	129	100	115	119	118	118	118	118	118	118
Total - Count			1251	1195	1198	1201	1314	1314	1314	1314	1314	1314
Total - FTE nominal (DL=.5; Cert=.33)			1049	1005	998	1003	1085	1085	1085	1085	1085	1085
Total - FTE de facto(*1.33)			1343	1284	1275	1282	1381	1381	1381	1381	1381	1381
<b>EXPENDITURE PER STUDENT</b>												
<b>Core Budget / Count</b>												
Core Budget / Count			51	63	66	66	57	56	56	55	56	56
Core Budget - Infl Adj / Count			53	63	64	62	52	50	48	46	45	44
<b>Core Budget / FTE-Nominal</b>												
Core Budget / FTE-nominal			61	75	79	79	69	68	68	67	68	68
Core Budget - Infl Adj / FTE-nominal			63	75	77	75	63	60	58	56	55	54
<b>Core Budget / FTE-defacto</b>												
Core Budget / FTE-defacto			48	58	62	62	54	53	53	53	53	54
Core Budget - Infl Adj / FTE-defacto			49	58	60	59	49	48	46	44	43	42

•Naval expenditure per Naval student approximates ~\$55k/year

•Expenditure cost per student – significant decrease from FY10

Concept of de Facto FTE

# Program Review

